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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,727	04/09/2004	Tim St. Pierre	0730.0066C	9025
27896	7590	09/02/2005	EXAMINER	
EDELL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			VARGAS, DIXOMARA	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/820,727

Applicant(s)

ST. PIERRE ET AL.

Examiner

Dixomara Vargas

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 4-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahn (US 5,509,412 A).

With respect to claims 1, 3 and 28-30, Bahn discloses a method estimating the spatial variation of magnetic resonance imaging radio frequency (RF) signal intensities within an object from measured RF signal intensities of a uniform spin density medium surrounding the object from measured RF signal intensities of a uniform spin density medium surrounding the object, said method comprising: acquiring magnetic resonance image of an object bounded medium which essentially uniform spin density, the length scale of resolution of the image (Column 2, lines 21-46); formulating a semi-empirical mathematical model of variation RF signal intensity within said object; fitting said model to a selected measured RF signal intensities of said surrounding medium to obtain an estimate of the spatial variation in magnetic resonance imaging radiofrequency (RF) signal intensities within said object (Column 2, lines 21-46).

3. With respect to claim 2, Bahn discloses the step of locating a plurality of points in a plane of said image which are notionally consider to act as apparent receivers of the RF signals (hereinafter referred as "RF receiver points); and formulating a spatial profile of RF signal

intensity within said object in said plane of said image relative the said RF receiver points  
(Column 2, lines 21-46).

*Allowable Subject Matter*

4. Claims 4-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

a. With respect to claim 4, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a method estimating the spatial variation of magnetic resonance imaging radio frequency (RF) signal intensities within an object from measured RF signal intensities of a uniform spin density medium surrounding the object from measured RF signal intensities of a uniform spin density medium surrounding the object, said method comprising the step wherein said spatial intensity profile formulated a manner which provides a concentric reduction RF signal intensity with increasing distance from said RF receiver points in combination with the remaining limitations of claims 1 and 2 above.

b. With respect to claims 5-24, the claims have been found allowable due to its dependency on claim 4 above.

c. With respect to claim 25, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a method estimating the spatial variation of magnetic resonance imaging radio frequency (RF) signal

intensities within an object from measured RF signal intensities of a uniform spin density medium surrounding the object from measured RF signal intensities of a uniform spin density medium surrounding the object, said method comprising the step wherein when the magnetic resonance image is a spin echo image, providing an estimate of the image intensities within the object at zero echo time by dividing the estimated signal intensities within the object at the given echo time by a percentage decay in signal intensity expected within the surrounding medium at the given echo time and then dividing this result by a ratio of hydrogen proton spin density expected of the bounding medium relative to hydrogen proton spin density expected of the object itself in combination with the remaining limitations of claim 1 above.

d. With respect to claims 26-27, the claims have been found allowable due to its dependency on claim 25 above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

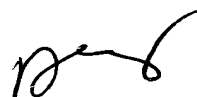
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dixomara Vargas  
Art Unit 2859  
August 31, 2005



Diego Gutierrez  
Supervisory Patent Examiner  
Technology Center 2800